STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES

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EARL WARREN, Governor

FRANK B. DURKEE, Director of Public Works

A. D. EDMONSTON, State Engineer

REPORT ON WATERMASTER SERVICE

IN

SUSAN RIVER WATERMASTER SERVICE AREA

Lassen County, California

1952 SEASON

Sacramento, California

SUBMISSION TO, AND ADOPTION BY
DEPARTMENT OF PUBLIC WORKS

I, L. C. Jopson, Supervising Hydraulic Engineer, Division of Water Resources, Department of Public Works of the State of California, submit this "Report on Watermaster Service in Susan River Watermaster Service Area, Lassen County, California, 1952 Season".

/s/ L. C. JOPSON
Supervising Hydraulic Engineer

I, Gordon Zander, Assistant State Engineer, Division of Water Resources, Department of Public Works of the State of California, approve this "Report on Watermaster Service in Susan River Watermaster Service Area, Lassen County, California, 1952 Season".

/s/ GORDON ZANDER
Assistant State Engineer

I, A. D. Edmonston, State Engineer and Chief of the Division of Water Resources, Department of Public Works of the State of California, approve and adopt this "Report on Watermaster Service in Susan River Watermaster Service Area, Lassen County, California, 1952 Season", as a report of the Department of Public Works.

WITNESS my hand and the seal of the Department of Public Works of the State of California, this 22nd day of December, 1952.

DEPARTMENT OF PUBLIC WORKS
STATE OF CALIFORNIA

By /s/ A. D. EDMONSTON
A. D. Edmonston
State Engineer

(SEAL)

ORGANIZATION

Frank B. Durkee . . . . . Director of Public Works

A. D. Edmonston . . . . . State Engineer

Gordon Zander . . . . . Assistant State Engineer

This report was prepared under the direction of

L. C. JOPSON
Supervising Hydraulic Engineer

By

* A. J. Vandenberg
Associate Hydraulic Engineer
and Watermaster

T. R. Merryweather
Administrative Officer

*Resigned October 31, 1952

TABLE OF CONTENTS

	Page
INTRODUCTION	1
WATER SUPPLY	1
Precipitation	1
Stream Flow	2
DISTRIBUTION OF WATER	3
Willow Creek (Schedule 3)	3
Lassen, Gold Run, Hills and Piute Creeks (Schedule 4)	4
Susan River (Schedules 5 and 6)	5
Susan River Reservoirs	6
WATER RIGHT APPLICATIONS AND LEGAL CONTROVERSIES	7
EAGLE LAKE	8
ALL YEAR STREAM FLOW MEASUREMENTS	9
CHANGES IN OWNERSHIP OF LANDS AND WATER RIGHTS	9

TABLES

1. PRECIPITATION AT SUSANVILLE AIRPORT, LASSEN COUNTY, CALIFORNIA, 1943-44 to 1951-52.

2. Daily Discharge in Cubic Feet Per Second, SUSAN RIVER AT HAWS BELOW RAMSEY DITCH INCLUDING WATER RELEASED FROM STORAGE, May 1 to September 30, 1952.

3. Daily Discharge in Cubic Feet Per Second, OLD CHANNEL OF SUSAN RIVER BELOW WOODSTOCK DAM, May 1 to September 30, 1952.

4. Daily Discharge in Cubic Feet Per Second, SUSAN RIVER AT JOHNSTONVILLE BRIDGE, May 1 to September 30, 1952.

5. Daily Discharge in Cubic Feet Per Second, WILLOW CREEK BELOW MAPES CAMP, May 1 to September 30, 1952.

6. Daily Discharge in Cubic Feet Per Second, GOLD RUN CREEK ABOVE DIVERSIONS, April 24 to September 30, 1952.

7. Daily Discharge in Cubic Feet Per Second, RAMSEY DITCH AT HEAD, May 1 to September 30, 1952.

TABLE OF CONTENTS (Cont'd.)

TABLES (Cont'd.)

8. Daily Discharge in Cubic Feet Per Second, SUSAN RIVER ABOVE RAMSEY DITCH INCLUDING WATER RELEASED FROM STORAGE, June 1 to September 30, 1952.

9. Daily Discharge in Cubic Feet Per Second, NATURAL FLOW OF SUSAN RIVER ABOVE RAMSEY DITCH, June 1 to September 30, 1952.

10. Daily Discharge in Cubic Feet Per Second, WATER RELEASED FROM MCCOY AND HOG FLAT RESERVOIRS AND AVAILABLE FOR RE-DIVERSION AT SUSANVILLE, July 17 to August 19, 1952.

PLATE

1. HYDROGRAPH OF SUSAN RIVER AT HAWS, 1952.

INTRODUCTION

This is the eleventh annual report on watermaster service in the Susan River Watermaster Service Area, and covers the period of water distribution in 1952 beginning on April 18 and terminating on September 30.

The service areawas created by order of the Division of Water Resources on November 10, 1941 to include, with certain exceptions, all the water rights determined in the decree entered April 18, 1940 in the case of J. J. Fleming, et al, vs. J. R. Bennett, et al, No. 4573, Superior Court, Lassen County. Watermaster service has been provided during each irrigation season since the service area was created and annual reports prepared to show the work accomplished during each season.

The report is presented herein under seven headings as follows: Introduction, Water Supply, Distribution of Water, Water Right Applications and Legal Controversies, Eagle Lake, All Year Stream Flow Measurements, and Changes in Ownership of Lands and Water Rights. Following the text are tables presenting precipitation data at Susanville and water supply records at various locations within the area and a plate showing a hydrograph of Susan River above Susanville.

WATER SUPPLY

Precipitation

Data on precipitation, as compiled from observations made by the U.S. Weather Bureau at Susanville Airport, for the period October 1, 1951 to September 30, 1952, are shown on Table 1. The precipitation for the period was 18.72 inches which is equivalent to about 160 per cent of the nine-year mean.

According to the bulletin "Water Conditions in California, April 1, 1952", the water content of the snow on April 1 at the three stations in the Susan River watershed averaged about 212 per cent of the long time mean. As a result of this above normal snowpack there was a surplus of water over the major portion of the Susan River area until about July 1. Near normal water supply conditions prevailed during the remainder of the season.

Stream Flow

Stream flow measuring stations, equipped with automatic water stage recorders, were maintained during the period of watermaster service on the Old Channel of Susan River below Woodstock Dam, Susan River at Johnstonville Bridge, and Gold Run Creek above Diversions. Records of discharge at these stations are set forth in Tables 3, 4 and 6. Year around records of discharge of Susan River at Haws and Willow Creek below Mapes Camp are collected by the U. S. Geological Survey. Preliminary records of discharge for these stations, computed by applying gage heights obtained in the field to preliminary rating curves for the respective stations, are included as Tables 2 and 5.

The discharge of the Ramsey Ditch, as shown in Table 7, was obtained from intermittent observations of the flow through a 2-foot Parshall flume located near the head of the ditch.

The discharge of Susan River above the Ramsey Ditch, as shown in Table 8, was obtained by combining Tables 2 and 7. Table 9 sets forth the natural flow of Susan River above the Ramsey Ditch, exclusive of stored water released from McCoy and Hog Flat reservoirs. The natural flow during periods of reservoir release was computed from measurements and observations taken before and during the release of stored water.

The released storage water available for rediversion below Susanville was computed from measurements and observations taken before and during the release and is shown in Table 10.

A hydrograph of the Susan River at Haws showing the daily discharge is shown on Plate 1.

DISTRIBUTION OF WATER

The water rights in the Susan River Watermaster Service area are grouped into three divisions in the Susan River decree as follows:

Schedule 3 of the decree which defines the rights to the use of water from Willow Creek in Willow Creek Valley, Lower Willow Creek and the Susan River Delta below the Colony Dam;

Schedule 4 of the decree which defines the rights to the use of water from Gold Run Creek, Piute Creek, Hills Creek, Holtzclaw Creek and Lassen Creek above their confluence with Susan River;

Schedules 5 and 6 of the decree which defines the rights to the use of water from Susan River exclusive of its tributaries.

A discussion of the water supply and use for the 1952 season in each of the three divisions follows:

Willow Creek (Schedule 3)

Willow Creek Valley

There was ample water for all use in Willow Creek until about May 10 when the stream approached its summer flow with water available only for first priority and about thirty per cent of second priority allotments. As little water was stored in the Walsh Reservoir during the period of surplus, due to manipulation of the storage level by the owner of the Barron ranch, the water

usually available from that source was exhausted by May 22. Thereafter until about July 1, heavy moss growth in the channel of Willow Creek combined with the difficulty of getting the proper proportion of the flow of Willow Creek through the Barron ranch caused some shortage to occur in the lower portions of Willow Creek Valley. After July 1, the proper proportion of the water supply was again available below the Barron ranch and an adequate supply of water was available to supply the diminished requirements during the haying and late summer season.

Lower Willow Creek and Susan River Delta below Colony Dam

Until August 20 the water supply in this area was generally ample to meet all requirements due largely to the above normal discharge of the Susan River reaching the Colony Dam.

After the first of September the water from Susan River was no longer available in any appreciable quantity and use was almost entirely dependent on the flow from lower Willow Creek. During this period the supply was sufficient to satisfy all first priority allotments and about forty per cent of the second priority allotments. The supply of second priority water was ample to fill stockwatering requirements throughout the remainder of the season.

Lassen, Gold Run, Hills and Piute Creeks (Schedule 4)

Lassen Creek

The flow of Lassen Creek was adequate to meet all irrigation needs until the end of the haying season about September 1. Stockwater was available where needed along the creek during the entire season.

Holtsclaw Creek, a tributary of Lassen Creek, supplied water to all priorities until about July 1. Thereafter the entire flow was used on the Hulsman ranch.

Gold Run Creek

The flow of Gold Run Creek was sufficient to meet all requirements until about the 20th of August. Subsequently, and until the end of the season,

water was available only for stock water down to and including the Rahm (Dotson) ranch.

Hills Creek

The flow of Hills Creek was adequate to supply all irrigation requirements until about August 1 after which the water supply rapidly decreased. During the low flow period after September 1, the available flow was sufficient to supply stock water to all ranches.

Piute Creek

There was sufficient water in Piute Creek to satisfy all requirements until about August 15th. Thereafter water was available for only forty per cent of allotments with all of the available water, except 0.27 cubic foot per second required for the pro rata allotments of the downstream users, being diverted by the California Pacific Utilities Company.

Susan River (Schedules 5 and 6)

Schedule 5

The natural flow of Susan River was adequate to meet all irrigation requirements until about July 10. Subsequent to that date, the ranches in the delta area reduced their diversions for haying and little shortage was felt until after September 1. During September, water was available for all first priority rights and some stock water was available under second priority rights.

The Woodstock, Johnstonville, Ripley, Barham, Johnston and Chappius, Dill, and Tanner dams were used during the 1952 season.

The per cent of allotments delivered to the first, second and third priority rights under Schedule 5 are given by months in the following tabulation:

Month	Percentage of Allotments		
	Month Priority	Second Priority	Third Priority
April	100	100	100
May	100	100	100
June	100	100	100
July	100	100	40
August	100	50	40
September	100	20	20

Schedule 6

There was sufficient water in Susan River to meet nearly all requirements under Schedule 6 as late as July 2. Thereafter the entire water supply was used by earlier priorities set forth in Schedules 3 and 5. Stock water was available in Hartson Slough throughout the season.

Susan River Reservoirs

The Lassen Irrigation Company owns and operates three reservoirs in the Susan River stream system. Lake Leavitt from which water is released into the distribution system was filled to capacity in April with releases for irrigation beginning in May. McCoy Reservoir in the upper drainage area was filled to capacity in April. Hog Flat Reservoir near McCoy Reservoir was near full capacity by the end of the spring runoff. Releases began from McCoy and Hog Flat reservoirs for replenishment of storage in Lake Leavitt, on July 16 and were terminated on August 6 and August 16, respectively. About two thousand acre-feet of storage remained in McCoy Reservoir and about three thousand acre-feet in Hog Flat Reservoir at the end of the season.

The amount of stored water released from McCoy and Hog Flat reservoirs, measured at Susanville, was 7,680 acre-feet. Lake Leavitt Reservoir was practically empty on September 30. 1952

WATER RIGHT APPLICATIONS AND LEGAL CONTROVERSIES

Eight water right applications have been filed with the department to appropriate surplus water from Willow Creek as follows:

Application Number	Applicant	Amount	Season	Status
9123	Tanner Slough Irrigation Association	2,600 ac. ft.	10/15 to 5/1	License
12142	J. R. Barron	700 ac. ft.	11/1 to 4/1	Permit
12312	J. R. Barron	1,000 ac. ft.	11/1 to 4/1	Permit
12750	Herbert A. Miller	3 c.f.s. and 25 ac.ft.	3/1 to 4/1 11/1 to 4/1	Permit
13617	J. R. Barron	1,239 ac. ft.	11/1 to 4/1	Pending
13750	Dept. of Fish and Game	0.87 c.f.s. and 320 ac. ft.	11/1 to 3/1	Permit
13751	Dept. of Fish and Game	7.00 c.f.s. and 1,692 ac. ft.	11/1 to 5/15	Permit
14745	J. W. Mapes and McClelland Ranch	1,365 ac. ft.	11/1 to 3/1	Pending

Largely in connection with the development of storage under the J. R. Barron applications a series of controversies have arisen between J. R. Barron and his upstream neighbor, Mary Murrer, et al. These controversies have resulted in the filing of two actions in the Superior Court, Lassen County by Barron. The first action is concerned with the use of the old Eagle Lake By-pass Canal by Barron as a diversion conduit whereby water was backed over some of the Murrer lands. The bank of the canal was cut by Murrer above the Barron property to

relieve the flooding with the result that Barron was unable to control the water which flows onto his land. At a hearing on August 8 a temporary restraining order was granted the plaintiff.

The second action is concerned with the operation of the Jacobs-Neuhaus Ditch during the winter months to supply the water needed to fill the Barron reservoirs.

Neither of the actions affect the distribution of water by the watermaster.

EAGLE LAKE

In order to secure a record of the changes in water surface elevation of Eagle Lake, the department in 1947, began taking occasional measurements from an established bench mark to the water surface of the lake. These observations were continued during the 1952 season. The elevation of the water surface at the various times of observation prior to 1952 may be found in the 1950 and 1951 reports on Watermaster Service in the Susan River Watermaster Service Area. Observations of the elevation of water surface during 1952 are shown in the following tabulation:

Date	Distance in Feet B.M. to Water Surface	Water Surface Elevation
5-18-52	13.50	84.56
6-21-52	13.50	84.56
8-4-52	13.85	84.21
9-10-52	14.45	83.61
9-30-52	14.53	83.53

ALL YEAR STREAM FLOW MEASUREMENTS

Prior to the beginning of the 1949 irrigation season the Lassen County Chamber of Commerce requested the Department to collect year around stream flow records on Pine Creek, Baxter Creek and Long Valley Creek outside of the Susan River Watermaster Service Area and on Willow Creek and Susan River within the service area. Records of discharge at these stations during 1949-50 water year are included in "Report on Watermaster Service in Susan River Watermaster Service Area, 1950".

The records of discharge for the 1950-51 and 1951-52 water years at Pine Creek, Susan River and Willow Creek stations are included in the published records of the U.S. Geological Survey. The records at the Baxter Creek station for these two years are included in "Report on Water Supply and Use of Water on Baxter Creek Stream System, Lassen County, California, April, 1952" and "Report on Investigation and Watermaster Service on Baxter Creek Stream System, 1952 Season" prepared by the department in the Baxter Creek adjudication proceeding.

The 1952 record of discharge at the station on Long Valley Creek prior to April 1 is incomplete and a satisfactory record of the flow during the winter months was not obtained. Subsequent to April 1, when the Susan River watermaster was available to maintain the station, the record is complete and is on file in the office of the Division of Water Resources.

CHANGES IN OWNERSHIP OF LANDS AND WATER RIGHTS

The changes in ownership of lands and water rights which have occurred subsequent to filing "Statement for Susan River Watermaster Service Area, County of Lassen, State of California, for 1952" and which shall be included in the 1953 statement for said service area, are listed in the following tabulation:

Tract No.	Name of Water Right Owner Appearing in 1952 Statement	Name of Water Right Owner to Appear in 1953 Statement	Amount of Water c.f.s.
12-9	Bates, Wesley and Bates, Ethel	Barron, J. R. and Barron, Rita	0.06
12-85	Buffum, Sara E.	Milton, Raul and Milton, Rita Pauline	1.00
12-474	Carter, Margaret Louise	Amesbury, Robert H. and Amesbury, Frances	0.135
12-62	Dotson, Vernon	Rahm, Gustave E. and Rahm, Helayne	4.90
12-98	Gibson, B. F. and Gibson, Clara E.	Gibson, Clara E. and Gibson, Estate of B.F.	7.50
12-109	Mapes, James W. and Mapes, Donna G.	Mapes, James W.	13.29
12-99	McClelland, Estate of James H. B. and McClelland, Esther A.	McClelland, Esther A.	10.75
12-68	Ridenour, Minnie C.; Ridenour, Estate of S.D.; Sella, Harry and Sella,	Ridenour, Minnie G.; Sella, Harry and Sella, Ancilla	5.20
12-93	Stowe, Van A.; Stowe, Marion; Hutton, Julian C. and Hutton, Ruby A.	Stowe, Vane A.; Hutton, Julian C. and Hutton, Ruby A.	1.00
12-119	Streshly, Estate of James	Streshly, Donald F.; Streshly, Tod; Streshly, Dorothy J.; Jenkins, Thomas L. and Jenkins, Mabel R.	3.50
12-41	Ulch, Millard and Ulch, Helen	Padilla, Edward J. and Padilla, Zella	0.35
12-38	Ulch, Millard and Ulch, Claire	Ulch, Millard, and Ulch, Helen	1.05
12-112	Cappezoli, John and DeWitt, Josephine G.	Cappezoli, John and Cappezoli, Dorothy DeWitt, Josephine G.	3.75 3.75
12-65	Emerson, Clarissa and Emerson, Estate of Tro	Emerson, Clarissa; Wheeler, Juanita; Emerson, Hyden; Mortimer, Jane; and Emerson, Rollie D.	10.65

TABLE 1

PRECIPITATION AT SUSANVILLE AIRPORT, LASSEN COUNTY, CALIFORNIA

Monthly, Seasonal, and Average Amounts in Inches

1943-44 to 1951-52

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Season
1943-44	1.17	.89	.90	2.06	3.14	1.98	1.03	.14	1.82	.47	.04	.19	13.83
1944-45	.35	3.67	1.58	.38	2.42	.80	.33	.77	.46	.27	.09	.47	11.59
1945-46	2.92	2.01	3.65	.40	.89	1.21	.25	.07	.01	.59	.00	.20	12.20
1946-47	.25	3.28	1.50	.25	1.28	1.37	.67	1.13	.47	.00	.18	.02	10.40
1947-48	1.57	.07	.15	.91	.66	.85	1.85	1.39	1.43	.00	.00	.04	8.92
1948-49	.61	.48	1.55	.24	.60	.97	.01	1.89	.00	.04	.00	.24	6.63
1949-50	.01	1.11	.17	1.36	1.86	1.36	.72	.36	.98	.00	.21	1.33	9.47
1950-51	2.44	3.11	2.03	2.06	.78	.09	1.56	.86	.50	.00	.12	.03	13.58
1951-52	1.93	1.06	3.49	4.79	2.21	3.10	.32	.53	.19	.67	.00	.43	18.72
9-Year Mean	1.25	1.74	1.67	1.38	1.54	1.30	.75	.79	.65	.23	.07	.33	11.70

TABLE 2

Daily Discharge in Cubic Feet Per Second
SUSAN RIVER AT HAWS BELOW RAMSEY DITCH
INCLUDING WATER RELEASED FROM STORAGE
May 1 to September 30, 1952

Day	May	June	July	August	September
1		350	87	190	7.5
2		350	80	185	7.5
3		350	79	180	7.3
4		350	84	180	7.3
5		350	60	180	7.3
6		300	55	90	8.0
7		300	50	80	8.0
8		300	42	75	8.3
9		270	40	70	9.0
10		295	36	60	10.0
11	Average	275	35	60	22
12	Estimated:	255	33	60	17.0
13	Flow	240	32	55	14.0
14	1,000	230	30	55	13.0
15		275	27	54	12.0
16		200	23	23	11.5
17		180	100	14.0	11.5
18		175	140	9.0	11.0
19		165	170	8.5	10.5
20		160	180	8.0	10.5
21		135	180	7.8	10.0
22		115	180	7.5	9.5
23		125	180	7.5	9.5
24		115	180	7.5	9.5
25		110	180	7.5	9.0
26		108	190	7.4	9.0
27		105	185	7.4	9.0
28		105	190	7.4	9.0
29		107	185	7.6	9.0
30		97	205	7.5	9.0
31			195	7.0	
Total Sec. Ft. Days	31,000	6,432	3,433	1,718.6	305.7
Mean Sec. Ft.	1,000	214	110	55.4	10.2
Total Ac. Ft.	61,500	12,800	6,780	3,410	605

Total for period - 85,100 acre-feet

Note: This table subject to revision upon publication of U. S. Geological Survey records.

TABLE 3

Daily Discharge in Cubic Feet Per Second
OLD CHANNEL OF SUSAN RIVER BELOW WOODSTOCK DAM
May 1 to September 30, 1952

Day	May	June	July	August	September
1	15.0	17.0	10.0	14.0	8.0
2	15.0	17.0	10.0	14.0	8.0
3	15.0	17.0	10.0	14.0	8.0
4	15.0	17.0	9.0	14.0	8.0
5	15.0	17.0	9.0	14.0	8.0
6	15.0	20	9.0	14.0	8.0
7	15.0	22	8.0	14.0	8.0
8	15.0	20	8.0	14.0	8.0
9	15.0	18.0	6.0	14.0	8.0
10	15.0	16.0	7.0	14.0	12.0
11	15.0	16.0	9.0	14.0	11.0
12	15.0	12.0	9.0	14.0	10.0
13	15.0	12.0	8.0	14.0	10.0
14	15.0	12.0	8.0	14.0	9.0
15	15.0	12.0	7.0	14.0	9.0
16	17.0	11.0	7.0	12.0	9.0
17	17.0	11.0	8.0	10.0	9.0
18	17.0	11.0	12.0	9.0	9.0
19	17.0	10.0	12.0	9.0	9.0
20	17.0	10.0	12.0	9.0	9.0
21	17.0	10.0	12.0	9.0	9.0
22	17.0	9.0	12.0	9.0	9.0
23	17.0	7.0	14.0	9.0	9.0
24	17.0	10.0	14.0	9.0	9.0
25	17.0	10.0	14.0	9.0	9.0
26	17.0	11.0	14.0	8.0	9.0
27	17.0	11.0	14.0	8.0	9.0
28	17.0	11.0	14.0	8.0	8.0
29	17.0	11.0	12.0	8.0	8.0
30	17.0	11.0	11.0	8.0	8.0
31	17.0		14.0	8.0	
Total Sec. Ft. Days	497	399	323	352	265
Mean Sec. Ft.	16.0	13.3	10.4	11.4	8.8
Total Ac. Ft.	985	790	640	700	525

Total for period - 3,640 acre-feet.

TABLE 4

Daily Discharge in Cubic Feet Per Second
SUSAN RIVER AT JOHNSTONVILLE BRIDGE
May 1 to Septembert 30, 1952

Day	May	June	July	August	September
1		250	55	20	5.0
2		250	50	20	5.0
3		250	45	20	5.0
4		250	45	24	4.0
5		240	40	25	4.0
6		240	40	25	4.0
7		240	35	25	4.0
8		200	30	15.0	4.0
9		200	30	15.0	5.0
10		190	25	15.0	7.0
11	Average	190	25	15.0	7.0
12	Estimated	190	20	15.0	7.0
13	Flow	150	20	12.0	6.0
14	1,000	150	20	12.0	6.0
15		140	18.0	12.0	5.0
16		120	16.0	12.0	5.0
17		100	15.0	12.0	4.0
18		100	15.0	10.0	4.0
19		90	15.0	10.0	4.0
20		80	15.0	10.0	4.0
21		80	14.0	10.0	4.0
22		80	14.0	10.0	4.0
23		80	14.0	10.0	4.0
24		70	12.0	10.0	4.0
25		70	12.0	10.0	4.0
26		70	12.0	8.0	5.0
27		70	12.0	7.0	5.0
28		60	12.0	6.0	5.0
29		60	20	6.0	5.0
30		60	20	6.0	5.0
31			20	6.0	
Total Sec. Ft. Days	31,000	4,320	736	413	144
Mean Sec. Ft.	1,000	144	23.7	13.3	4.8
Total Ac. Ft.	61,500	8,570	1,460	820	286

Total for period - 72,600 acre-feet.

TABLE 5

Daily Discharge in Cubic Feet Per Second
WILLOW CREEK BELOW MAPES CAMP
May 1 to September 30, 1952

Day	May	June	July	August	September
1	30	13.0	14.0	20	15.0
2	30	13.0	14.0	20	15.0
3	30	13.0	14.0	20	15.0
4	30	13.0	14.0	20	15.0
5	30	13.0	17.0	20	15.0
6	25	13.0	17.0	20	15.0
7	25	13.0	17.0	20	15.0
8	25	13.0	17.0	20	15.0
9	25	13.0	17.0	20	15.0
10	25	13.0	17.0	20	15.0
11	20	13.0	17.0	20	15.0
12	20	13.0	20	20	15.0
13	20	13.0	20	20	15.0
14	20	13.0	20	20	15.0
15	20	13.0	20	20	15.0
16	20	13.0	20	20	15.0
17	20	13.0	20	20	15.0
18	20	13.0	20	20	15.0
19	20	13.0	20	20	15.0
20	20	13.0	20	20	15.0
21	15.0	13.0	20	18.0	15.0
22	15.0	13.0	20	18.0	15.0
23	15.0	13.0	20	18.0	15.0
24	15.0	13.0	20	18.0	15.0
25	15.0	13.0	20	18.0	15.0
26	15.0	14.0	20	15.0	15.0
27	15.0	14.0	20	15.0	15.0
28	15.0	14.0	20	15.0	15.0
29	15.0	14.0	20	15.0	15.0
30	15.0	14.0	20	15.0	15.0
31	15.0		20	15.0	
Total Sec. Ft. Days	640	395	575	580	450
Mean Sec. Ft.	20.6	13.2	18.5	18.7	15.0
Total Ac. Ft.	1,270	783	1,140	1,150	893

Total for period - 5,240 acre-feet.

Note: This table subject to revision upon publication of U. S. Geological Survey record.

TABLE 6

Daily Discharge in Cubic Feet Per Second
GOLD RUN CREEK ABOVE DIVERSIONS
April 24 to September 30, 1952

Day	April	May	June	July	August	September
1	NO	30	15.0	14.0	5.0	4.0
2		30	15.0	14.0	5.0	4.0
3	RECORD	30	15.0	14.0	5.0	4.0
4		30	15.0	14.0	5.0	4.0
5		30	15.0	14.0	5.0	4.0
6		35	15.0	12.0	5.0	5.0
7		35	15.0	12.0	5.0	5.0
8		35	15.0	12.0	5.0	5.0
9		35	15.0	12.0	5.0	8.0
10		40	15.0	12.0	5.0	10.0
11		40	15.0	12.0	4.0	8.0
12		35	15.0	12.0	4.0	6.0
13		35	15.0	12.0	4.0	5.0
14		30	15.0	12.0	4.0	5.0
15		30	15.0	10.0	4.0	5.0
16		30	15.0	10.0	4.0	4.0
17		30	15.0	10.0	4.0	4.0
18		30	15.0	10.0	4.0	4.0
19		30	15.0	10.0	4.0	4.0
20		30	15.0	8.0	4.0	4.0
21		25	15.0	8.0	4.0	4.0
22		25	20	8.0	4.0	4.0
23		25	25	8.0	4.0	4.0
24	40	25	25	8.0	4.0	4.0
25	40	25	20	6.0	4.0	4.0
26	40	20	20	6.0	4.0	5.0
27	45	20	15.0	6.0	4.0	5.0
28	45	20	15.0	6.0	4.0	5.0
29	40	20	15.0	6.0	4.0	5.0
30	40	20	15.0	6.0	4.0	5.0
31		20		5.0	4.0	
Total Sec. Ft. Days	290	895	485	309	134	147
Mean Sec. Ft.	41.4	28.9	16.2	10.0	4.3	4.9
Total Ac. Ft.	575	1,770	964	613	266	292

Total for period - 4,480 acre-feet.

TABLE 7

Daily Discharge in Cubic Feet Per Second
RAMSEY DITCH AT HEAD
May 1 to September 30, 1952

Day	May	June	July	August	September
1	NO	5.5	3.0	6.0	3.0
2		5.5	5.0	6.0	3.3
3	FLOW	5.5	2.0	5.5	3.5
4		5.5	4.5	5.5	3.5
5		5.5	5.0	5.5	3.5
6		5.8	5.0	4.5	3.5
7		5.8	5.7	4.5	3.5
8		5.8	5.7	4.0	3.5
9		5.8	5.7	4.0	3.5
10		5.8	5.7	4.0	3.5
11		5.8	5.5	4.0	3.5
12		5.5	5.5	4.0	3.5
13		5.5	5.5	3.5	3.5
14		5.5	5.5	3.5	3.5
15		5.5	5.5	3.5	2.7
16		5.4	5.5	3.0	2.7
17		5.4	5.5	3.0	2.0
18		5.4	5.5	3.0	1.2
19		5.4	5.5	3.0	1.2
20		5.4	5.5	3.0	1.2
21		5.0	5.5	2.8	2.0
22		5.0	5.5	3.5	2.7
23	3.0	5.0	5.5	3.4	2.7
24	4.6	5.0	5.5	3.3	2.7
25	6.0	5.0	5.5	3.0	2.7
26	4.6	5.0	5.5	3.0	3.0
27	5.0	5.0	5.5	3.0	3.0
28	5.0	4.0	5.5	3.0	3.0
29	5.0	1.0	5.5	2.8	3.0
30	5.0	1.0	5.1	3.0	3.0
31	5.0		6.2	3.5	
Total Sec. Ft. Days	43.2	152.3	163.1	117.3	87.1
Mean Sec. Ft.	1.4	5.1	5.3	3.8	2.9
Total Ac. Ft.	86	302	324	233	173

Total for period - 1,120 acre-feet.

TABLE 8

Daily Discharge in Cubic Feet Per Second
SUSAN RIVER ABOVE RAMSEY DITCH INCLUDING WATER
RELEASED FROM STORAGE
June 1 to September 30, 1952

Day	June	July	August	September
1	355	90	196	10.0
2	355	85	191	10.0
3	355	81	185	11.0
4	355	89	185	11.0
5	355	65	185	11.0
6	308	60	95	11.0
7	308	56	85	12.0
8	308	48	79	12.0
9	278	46	74	13.0
10	300	42	64	14.0
11	280	40	64	25
12	260	38	64	21
13	245	37	58	18.0
14	235	35	58	16.0
15	220	32	57	15.0
16	205	28	26	14.0
17	185	106	17.0	13.0
18	180	145	12.0	12.0
19	170	175	12.0	12.0
20	165	185	11.0	12.0
21	140	185	10.0	12.0
22	120	185	11.0	12.0
23	130	185	11.0	12.0
24	120	185	11.0	12.0
25	115	185	11.0	12.0
26	113	195	10.0	12.0
27	110	190	10.0	12.0
28	109	195	10.0	12.0
29	108	190	10.0	12.0
30	98	210	10.0	12.0
31		200	10.0	
Total Sec. Ft. Days	6,585	3,588	1,832	393
Mean Sec. Ft.	220	116	59.1	13.1
Total Ac. Ft.	13,100	7,120	3,640	780

Total for period - 24,600 acre-feet.

TABLE 9

Daily Discharge in Cubic Feet Per Second
NATURAL FLOW OF SUSAN RIVER ABOVE RAMSEY DITCH
June 1 to September 30, 1952

Day	June	July	August	September
1	355	90	17.0	10.0
2	355	85	17.0	10.0
3	355	81	17.0	11.0
4	355	89	16.0	11.0
5	355	65	16.0	11.0
6	308	60	15.0	11.0
7	308	56	14.0	12.0
8	308	48	14.0	12.0
9	278	46	14.0	13.0
10	300	42	13.0	14.0
11	280	40	13.0	25
12	260	38	13.0	21
13	245	37	12.0	18.0
14	235	35	12.0	16.0
15	220	32	12.0	15.0
16	205	28	12.0	14.0
17	185	25	11.0	13.0
18	180	23	11.0	12.0
19	170	22	11.0	12.0
20	165	21	11.0	12.0
21	140	20	11.0	12.0
22	120	19.0	11.0	12.0
23	130	19.0	11.0	12.0
24	120	18.0	11.0	12.0
25	115	18.0	10.0	12.0
26	113	17.0	10.0	12.0
27	110	17.0	10.0	12.0
28	109	17.0	10.0	12.0
29	108	17.0	10.0	12.0
30	98	17.0	11.0	
31		18.0	10.0	
Total Sec. Ft. Days	6,585	1,160	386	393
Mean Sec. Ft.	220	37.4	12.4	13.1
Total Ac. Ft.	13,100	2,300	766	780

Total for period - 16,900 acre-feet.

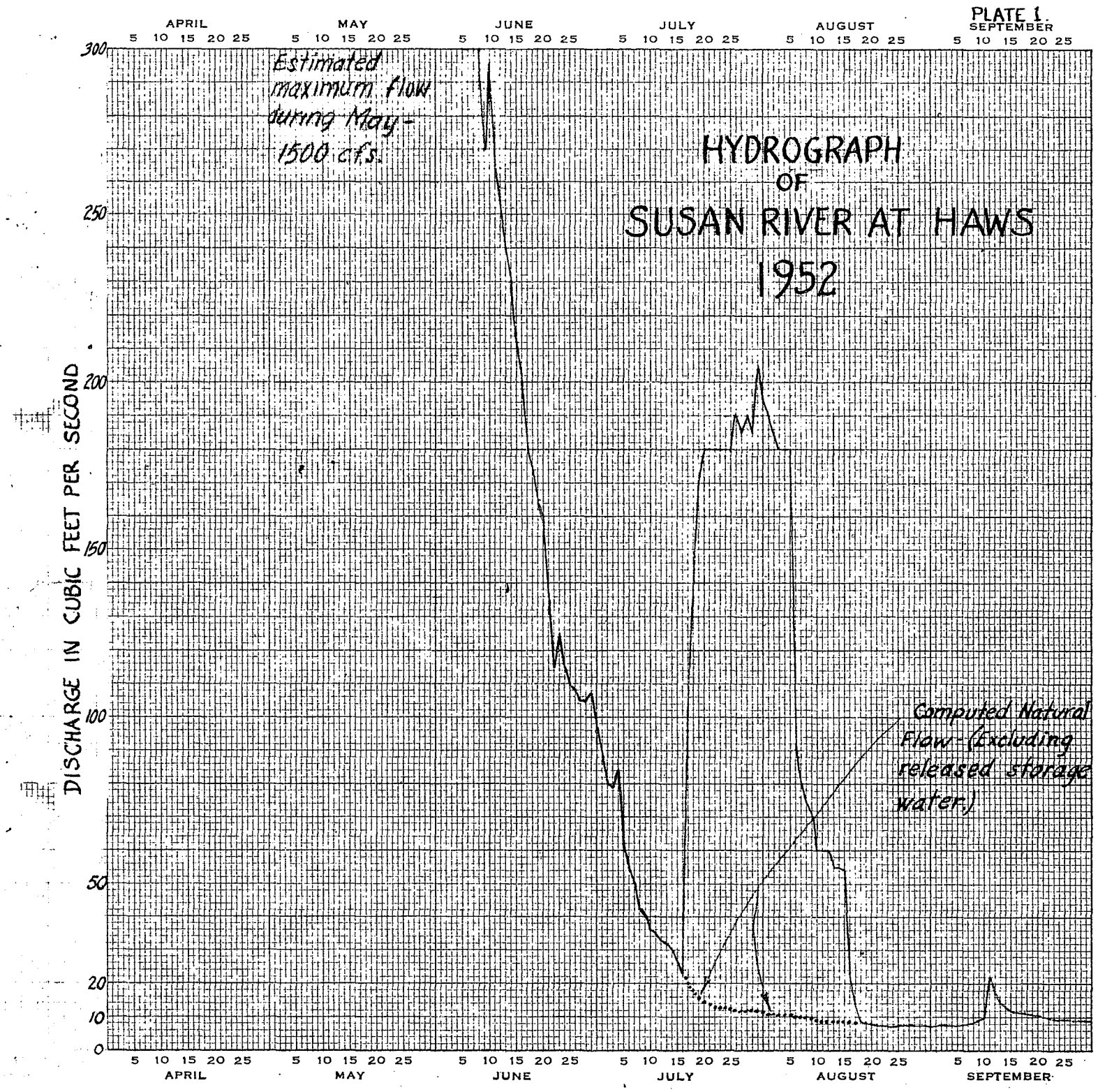
TABLE 10

Daily Discharge in Cubic Feet Per Second
WATER RELEASED FROM MCCOY AND HOG FLAT RESERVOIRS
AND AVAILABLE FOR RE-DIVERSION AT SUSANVILLE
July 17 to August 19, 1952

Day	May	June	July	August	September
1				179	
2	NO	NO	NO	174	NO
3				168	
4	RELEASE	RELEASE	RELEASE	169	RELEASE
5				169	
6				80	
7				61	
8				65	
9				60	
10				51	
11				51	
12				51	
13				46	
14				46	
15				45	
16			0	14	
17			81	5	
18			122	1	
19			153	1	
20			164	0	
21			165		
22			166	NO	
23			166	RELEASE	
24			167		
25			178		
26			178		
27			173		
28			178		
29			173		
30			193		
31			182		
Total Sec. Ft. Days			2,428	1,436	
Mean Sec. Ft.			152	72	
Total Ac. Ft.			4,820	2,860	

Total Release for period - 7,680 acre-feet.

PLATE 1.


HYDROGRAPH
OF
SUSAN RIVER AT HAWS
1952
Estimated maximum flow during May - 1500 c.f.s.
Computed Natural Flow - (Excluding released storage water)
DISCHARGE IN CUBIC FEET PER SECOND
300
250
200
150
100
50
20
10
0
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
5 10 15 20 25